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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,018	10/23/2003	Daniel Alvarez JR.	3194.1022-002	8519
21005	7590	08/26/2005	EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			LAWRENCE JR, FRANK M	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/692,018

Applicant(s)

ALVAREZ ET AL.

Examiner

Frank M. Lawrence

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 54,57-70,73 and 77-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 54,57-70,73 and 77-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

1. The indicated allowability of claims 54, 57-70, 73 and 77-90 is withdrawn in view of the newly drafted double patenting rejections that follow.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 54, 57-70, 73 and 77-90 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4 and 6-12 of U.S. Patent No. 6,391,090 in view of Lansbarkis et al. (6,511,528). The claims differ in that claims 54, 57, 73 and 77 recite preferred volume percentages of the components that fall within the ranges of the patented claims, that claims 58, 59, 78 and 79 recite preferred electropositive metal components, that claims 60-62 and 80-82 recite preferred zeolite types, that claims 63-66 and 83-86 recite preferred forms of a late transition metal compound, that claims 67-69 and 87-89 recite the use of a preferred high surface area inorganic support material, and that claims 70 and 90 recite purifying an isolated environment with the decontaminated gas.

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4. With respect to claims 54, 57, 73 and 77, it is submitted that the recited percentages are fully encompassed and envisioned in the patented claims, and that one having ordinary skill in the art would have selected the values using routine optimization because no criticality or unexpected results are demonstrated.

5. With respect to claims 70 and 90, claims 1, 10, 11 and 12 of the patent are anticipatory because the use of the purified gas in photolithography or metrology would inherently include purifying an isolated environment with the decontaminated gas, as purified gases are used to provide isolated clean environments for the contaminant-sensitive processes.

6. With respect to claims 58-66 and 78-86, it is submitted that they recite preferred components that are broadly encompassed and envisioned in the patented claims, and that one having ordinary skill in the art would have selected an electropositive metal, zeolite type and late transition metal in order to optimize decontamination performance while considering the level of original contamination, the level of allowable contamination, and the cost and availability of materials, especially when read in light of the specification which defines the meaning of claimed terms. Also, Lansbarkis et al. '528 discloses that ZSM-5 is a type of high-silica zeolite having a Si:Al ratio of greater than 20 and is useful in adsorbing sulfur containing compounds, nitrogen containing compounds, oxygen containing compounds, and hydrocarbons (col. 5, lines 12-59). It would have been obvious to one having ordinary skill in the art to select ZSM-5 as a high-silica zeolite in order to provide a material that is known to be useful in adsorbing those contaminants from a gas in the semiconductor industry.

7. With respect to claims 67-69 and 87-89, Lansbarkis et al. '528 discloses that a reduced metals such as nickel and copper that are supported on a matrix material such as alumina or silica

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can be used for reducing contaminants in carbon dioxide used in the semiconductor industry (col. 5, line 60 to col. 6, line 8). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the transition metal component of the patented claims by using a reduced form supported on alumina or silica in order to provide a material that is useful in reducing contamination to low levels, and to use high surface area supports in order to maximize the metal surface area that is exposed for contact with contaminants.

### ***Specification***

8. The disclosure is objected to because of the following informalities: In line 7 of claims 67 and 87, it appears that "support" should be changed to "supported".

Appropriate correction is required.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 54, 57-70, 73 and 77-90 have been considered but are moot in view of the new ground(s) of rejection. Applicant's amendment filed June 6, 2005 has been entered. This action is non-final because only new rejections are being presented.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank M. Lawrence  
Primary Examiner  
Art Unit 1724

*Frank Lawrence*  
8-22-05

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